In the Claims:

Please add claim 31, cancel claims 1, 2, 9, 14 to 18, 23 to 25 and 28 to 30 without prejudice and amend claims 3, 5, 6 and 8 as follows:

Claims 1 and 2 (canceled).

3.(currently amended) An *in vitro* method of determining hormonal effects of a test substance, said method comprising the steps of ~~The method as defined in claim 2, further comprising the additional steps of~~:

a) exposing cells, which express Ewing sarcoma protein (EWS) of SEQ ID NO: 2 or a fragment of said Ewing sarcoma protein comprising amino acids 319 – 656 ~~said Ewing sarcoma protein or said derivative of said Ewing sarcoma protein~~ and which express human ~~said~~ androgen receptor (AR) or a fragment of said receptor comprising amino acids 325 – 919 ~~said derivative of said androgen receptor (AR)~~, to said test substance to be tested *in vitro*; and

b) measuring protein-protein interaction or protein-protein-DNA interaction in order to determine the effect of the test substance on binding of ~~interaction between~~ said Ewing sarcoma protein (EWS) or said fragment ~~derivative~~ of said Ewing sarcoma protein with ~~and~~ said human androgen receptor (AR) or said ~~derivative of said androgen receptor (AR)~~ fragment thereof;

wherein a hormonal effect of the test substance is indicated by an increase or decrease in the binding in the presence of the test substance in comparison to the binding without the test substance present.

4.(previously presented) The method as defined in claim 3, wherein said cells are eukaryotic cells.

5.(currently amended) The method as defined in claim 3, wherein said cells are eukaryotic cells ~~and said eukaryotic cells are~~ selected from the group consisting of prostate cells, nerve cells, glia cells, fibroblasts, blood cells, osteoblasts, osteoclasts, hepatocyes, epithelial cells and muscle cells.

6.(currently amended) An *in vitro* method of determining hormonal effects of a test substance, said method comprising the steps of ~~The method as defined in claim 2, further comprising the additional steps of:~~

a) exposing cells, which express Ewing sarcoma protein (EWS) of SEQ ID NO: 2 or a fragment of said Ewing sarcoma protein comprising amino acids 319 – 656 ~~said Ewing sarcoma protein or said derivative of said Ewing sarcoma protein~~ and which express human ~~said~~ androgen receptor (AR) or a fragment of said receptor comprising amino acids 325 – 919 and wherein said cells are transfixed with a reporter gene construct, to said test substance to be tested *in vitro* together with a ligand of said receptor or said fragment thereof ~~and ligands of the androgen receptor (AR)~~; and

b) measuring reporter gene activity to determine transcription activity of the androgen receptor (AR) or said fragment thereof in the presence of said test substance; and

c) comparing the transcription activity determined in step b) with transcription activity determined by repeating steps a) and b) in the absence of said test substance;

wherein a hormonal effect of said test substance is indicated if said transcription activity measured in step b) is different from said transcription activity measured in step c).

7.(previously presented) The method as defined in claim 6, wherein said cells are eukaryotic cells.

8.(currently amended) The method as defined in claim 6, wherein said cells are a eukaryotic cells ~~and said eukaryotic cells are~~ selected from the group consisting of prostate cells, nerve cells, glia cells, fibroblasts, blood cells, osteoblasts, osteoclasts, hepatocyes, epithelial cells and muscle cells.

Claims 9 to 11 (canceled).

12.(withdrawn) A method for determining interference of a co-modulator mechanism between an androgen receptor and Ewing sarcoma protein, said method comprising measuring at least one of cellular concentrations and tissue concentrations of said androgen receptor and said Ewing sarcoma protein.

13.(withdrawn) The method as defined in claim 12, wherein said measuring of said concentrations is performed by radio immunoassay, ELISA, immunodyeing, RT-PCR, Western blot or Northern blot.

Claims 14 to 18 (canceled).

19.(withdrawn) A method of diagnosing illnesses, which are brought about by dysfunction of a nuclear receptor, said method comprising using a nucleic acid with at least 70 % homology to Seq. ID No. 1, or to sequence region 8 to 2032 or sequence region 1000 to 2011 of said Seq. ID No. 1, or using an antibody that acts against a protein coded by said nucleic acid.

20.(withdrawn) The method as defined in claim 19, wherein said nuclear receptor is an androgen receptor.

21.(withdrawn). A method of therapeutically treating illnesses, which are brought about by dysfunction of a nuclear receptor, said method comprising using a protein coded by a nucleic acid with at least 70 % homology to Seq. ID No. 1, or to sequence region 8 to 2032 or sequence region 1000 to 2011 of said Seq. ID No. 1, or using an anti-sense nucleic acid acting against said nucleic acid.

22.(withdrawn) The method as defined in claim 21, wherein said nuclear receptor is an androgen receptor.

Claims 23 to 25 (canceled).

26.(withdrawn) The method as defined in claim 12, wherein said cellular concentrations are measured in nerve cells and said tissue concentrations are measured in nerve tissue.

27.(withdrawn) The method as defined in claim 12, wherein said measuring of said concentrations takes place by RT-PCR.

Claims 28 – 30 (canceled).

31.(new) The method as defined in claim 3, wherein said measuring to determine the effect of the test substance comprises two hybrid system techniques, co-immuno-precipitation techniques, GST pull-down assays, FRET analyses and ABCD assays and/or gel retardation assays.